I CLAIM AS MY INVENTION:

1. A method for surface contouring of a three-dimensional image of a subject, comprising the steps of:

placing a first set of planes through the three-dimensional image;

determining contours that are imaged in each of the planes of the first set of planes and that are associated with a surface contour of the three-dimensional image; and

merging the contours determined in each plane of the first set of planes into a surface grid associated with the surface contour of the three-dimensional image.

2. A method as claimed in claim 1 wherein the planes of the first set of planes intersect in a first straight line.

3. A method as claimed in claim 2 wherein that the first straight line proceeds substantially through the geometric center of the three-dimensional image.

4. A method as claimed in claim 3 wherein said three-dimensional image is formed by a volume data set and comprising filtering said volume dataset to determine the geometric center of the three-dimensional image.

5. A method as claimed in claim 3 comprising the automatically determining the geometric center of the three-dimensional image.

6. A method as claimed in claim 3 comprising specifying the image contents of each plane of the first set of planes Cartesian coordinates and, for each plane, determining the contours in that plane by:

implementing a coordinate transformation to polar coordinates with regard to the geometric center of the three-dimensional image, and thereby unwinding the contour; and

determining the contour in the transformed plane.

7. A method as claimed in claim 6 comprising determining the contour in the transformed plane, by, after minimal changes, making a contour continuation in the direction of the angular coordinate of the polar coordinate with an optimization.

8. A method as claimed in claim 6 comprising improving the contour in the transformed plane by dynamic optimization.

9. A method as claimed in claim 2 wherein the set of planes is a first set of planes and wherein said straight line is a first straight line, and comprising:

placing a second set of planes through the three-dimensional image with the planes of the second set of planes intersecting in a second straight line;

determining the contours that are imaged in each of the planes of the second set of planes and that are associated with the surface contour of the three-dimensional image; and

together with the contours determined in each plane of the first set of planes, merging the contours determined in each plane of the second set of planes into the surface grid associated with the surface contour of the three-dimensional image.

10. A method as claimed in claim 9 wherein the first straight line is aligned at a right angle to the second straight line.

11. Method according to claim 10 wherein the first straight line and the second straight line intersect in the geometric center of the three-dimensional image.

12. A method as claimed in claim 1 comprising acquiring the three-dimensional image with a medical technology device, as representation of a part of a living organism as said subject.

13. A method as claimed in claim 12 comprising determining the geometric center of the three-dimensional image during a navigation-guided treatment of the living organism.